

The term "self-retaining" does not encompass the additional retention means found on page 10 of the specification. The term "self-retaining" means just what it says, namely, that the structure comprising a porous matrix is retained in the housing by itself. This is accomplished by adhesion between the structure and the wall of the housing, as disclosed at page 10, lines 16-22 of the specification. If additional retention means are required, the structure is not self-retaining.

By the accompanying amendment, the claims have been amended to recite that the structure is self-retaining by adhesion. Support for the amendment can be found at page 10, lines 16-22 of the specification. It is believed that the amendment now clarifies the term and overcomes the rejection.

The Examiner rejects claims 1-20, 22-24 and 31-34 under 35 U.S.C. §102(b) as being anticipated by Fernwood et al., or alternatively under 35 U.S.C. §103(a) as being unpatentable over Fernwood et al. The Examiner states that Fernwood teaches a device having sample reservoirs 12, collection reservoirs 20, filtration substrate 13 and spouts 14 fixed together with screws and latches. The Examiner considers the filter portions to be of the same thickness as the rest of the sheet, and that the adsorbent filters (TEFLON or TEFLON coated with diatomaceous earth) are inherently functionalized to be adsorbent. The Examiner considers the diatomaceous earth particles to be entrapped in the porous matrix. The Examiner cites Figure 4 as showing an aspect ratio of 10 based on the 30 mm diameter of the well by the 3 mm thickness of the filter. The Examiner considers that the porous regions are contained in the non-porous sheets and do not fall out, and are thus self-retaining. The Examiner also states that it is appropriate for her to rely on only the portion of the membrane of Fernwood that is within the well, since only this portion is "porous".

The Examiner is respectfully requested to reconsider her position.

Firstly, the Examiner is admittedly arriving at the aspect ratio determination by literally measuring the well 12 and membrane thickness in Figure 4. However, Fernwood is devoid of any indication that drawings are drawn to scale. As stated in *Hockerson-Halberstadt Inc. v. Avia Group International Inc.*, 55 U.S.P.Q.22 1487, 1491 (CAFC 2000):

“HHI’s argument is unavailing. The ‘792 patent is devoid of any indication that the proportions of the groove and fins are drawn to scale. HHI’s argument thus hinges on an inference drawn from certain figures about the quantitative relationship between the respective widths of the groove and fins. Under our precedent, however, it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” (Citations omitted).

Similarly, the *Manual of Patent Examining Procedure*, §2125 (1998) states:

“When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value.”

Accordingly, it is well settled that it is improper for the Examiner to assume the drawings are to scale and to measure the various elements to arrive at a conclusion that the claimed aspect ratio is shown. Applicants therefore respectfully submit that Fernwood does not disclose or suggest the aspect ratio claimed.

Furthermore, in view of the accompanying amendment to the claims, it is now clear that the self-retaining feature of the present invention is also not disclosed or suggested by Fernwood. Indeed, Fernwood’s express disclosure of a subassembly, including the membrane, that is held mechanically together by screws 26, teaches away from the instant invention as claimed.

The Examiner rejects claims 2 and 10 under 35 U.S.C. §103(a) as being unpatentable over Fernwood in view of Foltz. The Examiner cites Foltz for its disclosure of the entrapment of adsorbent particles in filter matrixes to effect separation.

Claims 2 and 10 are believed to be allowable by virtue of their dependence, for the reasons provided above.


The Examiner rejects claim 21 under 35 U.S.C. §103(a) as being unpatentable over Fernwood in view of Bowers. The Examiner cites Bowers for its disclosure of a filtration system with sample reservoirs and an underdrain tray having spouts, the sample reservoirs being bonded to the underdrain tray with the filter 70 therebetween.

Claim 21 is believed to be allowable by virtue of its dependence, for the reasons provided above.

The amendment is only now being made in view of the Examiner's explicit explanation of her interpretation of "self-retaining".

Reconsideration, entry of the amendment, and allowance are respectfully requested in view of the foregoing.

Respectfully submitted,

  
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**Version with Markings to Show Changes Made**

1. (Three times amended) A housing having a thickness, said housing have a first surface and a second surface spaced from said first surface by said housing thickness, said housing having one or more apertures formed through said housing, each of said one or more apertures defined by solid walls extending through said thickness of said housing and containing a self-retaining, by adhesion, structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure having an aspect ratio of less than about 20.

9. (Twice amended) A housing having a thickness, a length and a width, said housing having a first surface and a second surface spaced from said first surface by said thickness, the dimensions of said thickness being less than the dimensions of said length and/or said width, said housing having one or more apertures formed through said housing and defined by solid walls extending through said thickness, each of said one or more apertures containing a self-retaining, by adhesion, structure comprising a porous matrix.

17. (Three times amended) A sample preparation devices, comprising a sample reservoir and a collection reservoir spaced from said sample reservoir, and a substrate between said sample reservoir and said collection reservoir, said substrate have a first surface and a second surface spaced from said first surface defining a thickness, said substrate comprising one or more recesses formed therethrough, each of said one or more recesses defined by solid walls extending through said thickness and containing a self-retaining, by adhesion, structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure having an aspect ratio of less than about 20.

31. (Twice amended) A sample preparation device for use with a chamber in communication with a driving force, said device comprising:

a sample reservoir; a substrate fixed to said sample reservoir, said substrate having a first surface and a second surface spaced from said first surface, said substrate comprising at least one recess formed therethrough, said at least one recess defined by solid walls extending through said substrate and containing a self-retaining, by adhesion, structure comprising a porous matrix; and a spout fixed to said at least one recess for directing flow into said chamber.

33. (Twice amended) A housing having a thickness, said housing have a first surface and a second surface spaced from said first surface by said housing thickness, said housing having one or more apertures formed through said housing, each of said one or more apertures defined by solid walls extending through said thickness and containing a structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure being self-retaining in said housing by adhesion.

34. (Twice amended) A filtration device comprising a substrate having first and second spaced surfaces defining a housing thickness and an array of spaced, independent apertures formed through said housing thickness, each of said independent apertures defined by solid walls extending through said thickness and containing a formed porous matrix, the porous matrix in each independent aperture being segregated from the porous matrix in each other different independent aperture, said first and second surfaces in the space between said apertures being devoid of said porous matrix, said porous matrix adapted to be self-retaining in said apertures by adhesion.

### Replacement Sheets

1. (Three times amended) A housing having a thickness, said housing have a first surface and a second surface spaced from said first surface by said housing thickness, said housing having one or more apertures formed through said housing, each of said one or more apertures defined by solid walls extending through said thickness of said housing and containing a self-retaining, by adhesion, structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure having an aspect ratio of less than about 20.

9. (Twice amended) A housing having a thickness, a length and a width, said housing having a first surface and a second surface spaced from said first surface by said thickness, the dimensions of said thickness being less than the dimensions of said length and/or said width, said housing having one or more apertures formed through said housing and defined by solid walls extending through said thickness, each of said one or more apertures containing a self-retaining, by adhesion, structure comprising a porous matrix.

17. (Three times amended) A sample preparation devices, comprising a sample reservoir and a collection reservoir spaced from said sample reservoir, and a substrate between said sample reservoir and said collection reservoir, said substrate have a first surface and a second surface spaced from said first surface defining a thickness, said substrate comprising one or more recesses formed therethrough, each of said one or more recesses defined by solid walls extending through said thickness and containing a self-retaining, by adhesion, structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure having an aspect ratio of less than about 20.

31. (Twice amended) A sample preparation device for use with a chamber in communication with a driving force, said device comprising:

a sample reservoir; a substrate fixed to said sample reservoir, said substrate having a first surface and a second surface spaced from said first surface, said substrate comprising at least one recess formed therethrough, said at least one recess defined by solid walls extending through said substrate and containing a self-retaining, by adhesion, structure comprising a porous matrix; and a spout fixed to said at least one recess for directing flow into said chamber.

33. (Twice amended) A housing having a thickness, said housing have a first surface and a second surface spaced from said first surface by said housing thickness, said housing having one or more apertures formed through said housing, each of said one or more apertures defined by solid walls extending through said thickness and containing a structure comprising a porous matrix, said structure having a height between said first surface and said second surface less than or equal to said thickness, said structure being self-retaining in said housing by adhesion.

34. (Twice amended) A filtration device comprising a substrate having first and second spaced surfaces defining a housing thickness and an array of spaced, independent apertures formed through said housing thickness, each of said independent apertures defined by solid walls extending through said thickness and containing a formed porous matrix, the porous matrix in each independent aperture being segregated from the porous matrix in each other different independent aperture, said first and second surfaces in the space between said apertures being devoid of said porous matrix, said porous matrix adapted to be self-retaining in said apertures by adhesion.